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10/774,532

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EXAMINER

DEICHMEISTER, NICHOLAS F

ART UNIT

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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/774,532

Applicant(s)

VIMPARI ET AL.

Examiner

Nick Deichmeister

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 7 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 7 recites the limitation "said at least one channel" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said at least one channel" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-2, 10, 12-13, 15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kolmonen (U.S. Patent No. 6,308,081 B1).**

Kolmonen discloses a transmission method and radio system, comprising the following features:

Regarding claim 1, a method for providing a predetermined transmission rate (col. 4, lines 44-47, predefined standard coding rates) for an auxiliary information (col. 4, line 50, data in SID frames) in a predetermined channel (col. 4, lines 6-7, the radio channel) of a data transmission stream (col. 4, line 1, modulated signal), said method comprising the steps of: setting (col. 4, line 41, coding rate) for said data transmission stream an additional combination of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates), which determines a maximum allowable data rate (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed) higher by a predetermined rate amount than the maximum data rate of a signal transmitted via said predetermined channel (col. 5, lines 12-24, speech coder has a coded rate of 4.5 kbit/s; channel coder has a coded rate of 17.5 kbit/s), into a predetermined set of selectable combinations (col. 5, lines 12-24, speech coded at 4.5 kbit/s, channel coded at 17.5 kbit/s; or speech coded at 13 kbit/s, channel coded at 9 kbit/s) of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates); and using (col. 5, lines 1-2, alter[s] the channel coding rate of the channel coder) said predetermined rate amount of said predetermined channel to transmit said auxiliary information (col. 4, lines 62-63, information transmitted in the SID frames).

Regarding claim 2, wherein said transmission stream is a multiplex signal (col. 3, lines 34-37, radio system can be a GSM, CDMA or UMTS or IS95 system) having at least one channel (col. 4, lines 6-7, the radio channel), and said selectable transport formats can be allocated (col. 4, line 67-col. 5, line 2, coding parameters of the coder

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acting as a channel coder can be updated, which alters the channel coding rate) to said at least one channel.

Regarding claim 10, wherein said auxiliary information comprises a discontinuous transmission information (col. 1, line 27, DTX mode).

Regarding claim 12, wherein said data transmission stream is a downlink signal of a cellular network (col. 2, lines 24-33, a base transceiver station acting as a transceiver and subscriber terminals acting as transceivers).

Regarding claim 13, wherein said auxiliary information is replaced by a control information (col. 2, lines 62-65, it [the SID frame] can be any other frame containing control and measurement data).

Regarding claim 15, a device (fig. 2, transceiver; col. 3, lines 18-19, transceiver) for providing a predetermined transmission rate (col. 4, lines 44-47, predefined standard coding rates) for an auxiliary information (col. 4, line 50, data in SID frames) in a predetermined channel (col. 4, lines 6-7, the radio channel) of a data transmission stream (col. 4, line 1, modulated signal), said system comprising: setting means (fig. 4, control means 120; col. 4, lines 62-64, control means 120 can update the coding parameters of the coder) for setting said data transmission stream (col. 4, line 41, coding rate) an additional combination of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates), which determines a maximum allowable data rate (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed) higher by a predetermined rate amount than the maximum data rate of a signal transmitted via said channel (col. 5, lines 12-24, speech

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coder has a coded rate of 4.5 kbit/s; channel coder has a coded rate of 17.5 kbit/s), into a predetermined set of selectable combinations (col. 5, lines 12-24, speech coded at 4.5 kbit/s, channel coded at 17.5 kbit/s; or speech coded at 13 kbit/s, channel coded at 9 kbit/s) of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates); and transmission means (fig. 2, RF 124; col. 4, line 49, transmission means) for transmitting said auxiliary information (col. 4, lines 62-63, information transmitted in the SID frames) in said channel by using (col. 5, lines 1-2, alter[s] the channel coding rate of the channel coder) said predetermined rate amount.

Regarding claim 20, wherein said device is a base station device (fig. 1, BTS 200; col. 3, lines 27-28, base transceiver stations 200).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3-4, 6-9, 11, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolmonen in view of Odenwalder (U.S. Patent Application Publication No. 2002/0006138 A1).**

Kolmonen discloses the claimed limitations as discussed in paragraph 4 above. Kolmonen further discloses the following features:

Regarding claim 3, wherein said setting step comprises adding (col. 4, lines 44-47, altered according to the information in the SID frames) to a set of transport format combinations selectable for said at least one channel (col. 4, lines 44-47, predefined standard coding rates) and determining for said predetermined channel a new transport format leading to said maximum allowable rate (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Regarding claim 4, wherein said new transport format combination comprises a transport format selected for said predetermined channel (col. 4, lines 44-47, predefined standard coding rates) from a set of existing transport formats (col. 4, lines 44-47, predefined standard coding rates) allocated to said predetermined channel (col. 4, lines 6-7, the radio channel), said selected transport format leading to an additional maximum allowable data rate for said transmission stream (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Regarding claim 16, wherein said setting means is arranged to add (col. 4, lines 44-47, altered according to the information in the SID frames) to a set of transport format combinations selectable for said at least one channel (col. 4, lines 44-47, predefined standard coding rates) which determines for said predetermined channel a new transport format leading to said maximum allowable data rate (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Regarding claim 17, wherein said new transport format combination comprises a frame format selected for said predetermined channel (col. 4, lines 44-47, predefined

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standard coding rates) from a set of existing frame formats (col. 4, lines 44-47, predefined standard coding rates) allocated to said predetermined channel (col. 4, lines 6-7, the radio channel), said selected frame format defining for said predetermined channel said maximum allowable data rate (col. 5, lines 5-11, coding rate...can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Kolmonen does not disclose the following features:

Regarding claim 3, a new transport format combination.

Regarding claim 6, wherein said setting step comprises setting a restriction for using only a subset of selectable transport format combinations for said data transmission stream.

Regarding claim 7, wherein said predetermined channel is located at a predetermined fixed position within said at least one channel.

Regarding claim 8, wherein said fixed position corresponds to the last channel position within a frame of said data transmission system.

Regarding claim 9, wherein said maximum allowable data rate defines transport blocks of a predetermined size in said data transmission stream.

Regarding claim 11, wherein said channel is a dedicated channel.

Regarding claim 16, a new transport format combination.

Regarding claim 19, wherein said setting means is arranged to set a restriction for using only a subset of selectable transport format combinations for said signal transmitted via said predetermined channel.

Odenwalder discloses a method and apparatus for supporting adaptive multi-rate (AMR) data in a CDMA communication system, comprising the following features:

Regarding claim 3, a new transport format combination (fig. 4, modes 0-5, modes 6 and 7, modes 8-11, mode 15).

Regarding claim 6, wherein said setting step comprises setting a restriction (par. 0043, line 1, negotiated AMR service; par. 0043, four frame rates used for speech (AMR mode 0 through 7)) for using only a subset of selectable transport format combinations (par. 0043, four frame rates used for speech (AMR mode 0 through 7)) for said data transmission stream.

Regarding claim 7, wherein said predetermined channel is located at a predetermined fixed position within said at least one channel (par. 0024, lines 15-17, data for the physical channel; fig. 2, physical channel 1 through physical channel N).

Regarding claim 8, wherein said fixed position corresponds to the last channel position within a frame of said data transmission system (par. 0024, lines 15-17, data for the physical channel; fig. 2, physical channel N).

Regarding claim 9, wherein said maximum allowable data rate (fig. 4, Mode 8, MR bit in first position designates maximum rate; length of Mode 8 frame is fixed 46 bits; par. 0039, lines 1-3, maximum rate (MR) bit) defines transport blocks of a predetermined size (fig. 4, length of Mode 8 frame is fixed 46 bits) in said data transmission stream.

Regarding claim 11, wherein said channel is a dedicated channel (par. 0045, line 8, dedicated control channel (DCCH)).

Regarding claim 16, a new transport format combination (fig. 4, modes 0-5, modes 6 and 7, modes 8-11, mode 15).

Regarding claim 19, wherein said setting means is arranged to set a restriction (par. 0043, line 1, negotiated AMR service; par. 0043, four frame rates used for speech (AMR mode 0 through 7)) for using only a subset of selectable transport format combinations (par. 0043, four frame rates used for speech (AMR mode 0 through 7)) for said signal transmitted via said predetermined channel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Kolmonen by using the features, as taught by Odenwalder, in order to provide improved support for AMR speech codec data in a cdma2000 communication system (Odenwalder, par. 0003, lines 1-5).

7. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolmonen in view of Smallcomb (U.S. Patent Application Publication No. 2001/0034872 A1).

Kolmonen discloses the claimed limitations as discussed in paragraph 4 above. Kolmonen does not disclose the following features:

Regarding claim 5, allocating a set of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates) comprising a transport format which

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determines said maximum allowable data rate (col. 5, lines 5-11, coding rate... can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Regarding claim 18, allocating a set of selectable transport formats (col. 4, lines 44-47, predefined standard coding rates) comprising a transport format which determines said maximum allowable data rate (col. 5, lines 5-11, coding rate... can typically vary from 9 to 17.5 kbit/s, when the channel coder operates at full speed).

Smallcomb discloses a digital broadcasting system and method, comprising the following features:

Regarding claim 5, adding to said data transmission stream a new channel (par. 0014, lines 9-10, additional channels).

Regarding claim 18, adding to said data transmission stream a new channel (par. 0014, lines 9-10, additional channels).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Kolmonen by using the features, as taught by Smallcomb, in order to provide diversity in reception of plural digital broadcast signals (Smallcomb, par. 0013, lines 4-6), improving performance.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolmonen in view of Moulsey et al (U.S. Patent Application Publication No. 2002/0114291 A1).

Kolmonen discloses the claimed limitations as discussed in paragraph 4 above. Kolmonen does not disclose the following features:

Regarding claim 14, wherein said control information comprises HSDPA signaling information.

Moulsey et al discloses a radio communication system, comprising the following features:

Regarding claim 14, wherein said control information comprises HSDPA signaling information (par. 0045, lines 1-15, signaling of a quality parameter...in a UMTS MSDPA embodiment).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Kolmonen by using the features, as taught by Moulsey et al, in order to provide improved signaling (Moulsey et al, par. 0008).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bentall et al (U.S. Patent No. 6,411,629 B1) discloses a data interleaving method. Kowalski (U.S. Patent No. 7,031,249 B2) discloses an outer code for CSMA systems using an OFDM physical layer in contention-free mode. Deliot et al (U.S. Patent No. 6,052,390 discloses data code block transmission using preselected control signals and delimiters. Ahn et al (U.S. Patent No. 6,272,124 B1) discloses complementary service providing device and method in communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Deichmeister whose telephone number is (571)

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272-9746. The examiner can normally be reached on Monday through Friday (off alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

NFD

A handwritten signature in black ink, appearing to read 'Kwang Bin Yao', is written over the printed name and title.